

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1, 3 and 7-12 are pending in the application, with Claims 1 and 12 being independent. Claims 10 and 11 have been withdrawn from consideration. Claims 1 and 12 are amended herein to recite that the ink-receiving layer contains porous inorganic particles at a specified content by weight. Support for the amendments may be found in the specification at least at page 9, lines 21-24. Claim 6 is cancelled without prejudice to or disclaimer of its subject matter, in view of its amendment of Claim 1, and Claim 7 is amended in view of the cancellation of Claim 6. It is respectfully submitted that no new matter has been added.

Claims 1, 3, 6-9 and 12 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Ito et al. (U.S. Patent No. 5,912,085). Applicants respectfully disagree with this rejection as applied to the claims as currently presented.

The present invention, as recited in amended Claim 1, relates to an ink-jet recording medium comprising a base sheet and an ink-receiving layer on the base sheet. The ink-jet recording medium is for use in an ink-jet image forming method in which a transparent film layer formed on a substrate as coating is placed on the ink-receiving layer on which recording has been conducted, and then the side of the substrate is heated to transfer the transparent film layer on the ink-receiving layer. This is followed by peeling off the substrate to laminate the transparent film layer on the surface of the ink receiving-layer. The ink-receiving layer contains polyvinyl alcohol, porous inorganic particles and an epoxy compound as a cross-linking agent. The content of the polyvinyl alcohol in the ink-receiving layer is not lower than 30 weight %. The content of porous inorganic particles in the ink-receiving layer is 100 to 300 parts by weight based on 100 parts by weight of polyvinyl alcohol. The content of the epoxy compound is such that 1 to 10 equivalents of epoxy ring is contained based on 100 equivalents of OH group of the polyvinyl alcohol. Amended Claim 12 recites an ink-jet recording medium comprising a base

sheet and an ink-receiving layer thereon. The ink-receiving layer contains polyvinyl alcohol, porous inorganic particles and an epoxy compound as recited in Claim 1. In Applicant's view, Ito et al. does not teach or suggest the claimed invention.

In the ink-receiving layer of Ito, et al., the main component is an ink-absorptive resin, which may be polyvinyl alcohol. Applicant notes that for an ink-receiving layer that is mainly composed of an ink-absorptive resin, the ink-absorptive resin per se has the property of absorbing ink, which leads to the problem of poor water-fastness of the printed image. Thus, Ito, et al. crosslinks the ink-absorptive resin to an extent such that it does not lose its ink-absorptive property, but does improve the water-fastness. Accordingly, the crosslinking reaction of the ink-absorbing resin is conducted during the formation of the ink-receiving layer.

In contrast, in the ink-receiving layer of the present invention, ink is absorbed into the spaces between the porous inorganic particles, as well as by the porous inorganic particles themselves, while the amount of polyvinyl alcohol (which is a binder) is small. Since the ink-receiving layer contains a relatively large amount of porous inorganic particles, the problem could arise that the ink-receiving layer would also be removed when peeling the substrate off of the laminate material that had been placed on the ink-receiving layer after printing to transfer the transparent film layer. In order to solve this problem, in the claimed ink-jet recording medium, the cross-linking agent crosslinks polyvinyl alcohol during the heating lamination process to prevent the peeling-off of the ink-receiving layer caused by swelling between the ink-receiving layer and the substrate. Applicant further notes that the cross-linking reaction does not practically proceed at temperatures encountered during storage of the recording medium. (See page 11, line 17 to page 12, line 4.)

Applicant submits that Ito, et al. does not teach or suggest the features of the present invention as recited in independent Claims 1 and 12, in particular, the amount of porous inorganic particles in the ink-receiving layer. Applicant therefore submits that the present invention is patentably defined by independent Claims 1 and 12. The dependent claims are

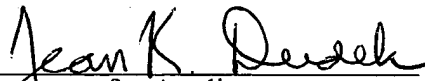
allowable for the reasons given regarding independent Claim 1, as well as for the patentable features recited therein. Individual consideration of the dependent claims is respectfully solicited.

Applicant submits that this application is in condition for allowance. Applicant respectfully requests rejoinder of Claims 10 and 11, which depend from Claim 1, and issuance of a Notice of Allowance.

Applicant also respectfully requests that this Amendment After Final be entered. This Amendment could not have been presented earlier as it was earnestly believed that the claims on file would be found allowable. Given the Examiner's familiarity with the application, Applicant believes that a full understanding and consideration of this Amendment would not require undue time or effort by the Examiner. No new claims have been added. Moreover, for the reasons discussed above, Applicant submits that this Amendment places the application in condition for allowance. At the very least, it is believed to place the application in better form for appeal. Accordingly, entry of this Amendment is believed to be appropriate and such entry is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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